Selected Abstracts

Small-Cell Carcinoma of the Lung-Survival According to Histologic Subtype; a Veterans Administration Lung Group Study. Stephen Davis, Kenneth E. Stanley, Raymond Yesner and others. Cancer, 1981 , 4: 1863.

This study was undertaken to analyze 620 patients with small cell carcinoma of the lung. The results of the study show that the histologic subtype of small cell carcinoma of the lung is of prognostic significance. The oat cell subtype behaves more favorably than the intermediate cell subtype.

Initial performance status, extent of disease and weight loss are now recognized as the dominant prognostic features for survival in bronchial carcinoma. These factors generally appear of prognostic significance for the histologic subtypes of small cell carcinoma. When patients in both subtypes presented with weight loss, survivals were similar. Longer survival was seen in subtype number 21 if weight loss was not documented. When survival within subtypes was analyzed by extent of disease, patients with extensive disease do better if they have oat cell carcinoma. No survival difference between oat cell and intermediate cell carcinoma was seen when the patient has limited disease, disease that is limited to hemithorax and mediastinum.

Martin J. Fischer

Bronchogenic Carcinoma and Postoperative Empyema; is Survival Really Enhanced? Alan Peterson, Marvin Kirsh and Herbert Sloan. Ann. Thorac. Surg., 1981,31 : 240.

In a series on 542 patients who underwent curative resection for bronchial carcinoma, postoperative empyema occurred in 17 and the five year survival was compared with the 525 patients without empyema. The authors were unable to demonstrate any favourable influence on survival in the patients with postoperative empyema.

Conflicting data in the literature on this topic was reviewed. Attention was directed to the difficulty in interpreting results due to a lack of coherent information with reference to histologic cell type, tumor staging, type of operation and presence of residual neoplasm. No patient in the series died of septicemia No patient in the series died of septicemia or other complications of empyema. In this study, patients with Stage I disease and squamous cell carcinoma continued to exhibit a better prognosis.

Michael S. Mcarthur

Posttraumatic Pulmonary Insufficiency Caused by the Microembolism Syndrome. Jan Modig. Acta Chir.Scand., 1980, SuppL : 57.

This study was undertaken to extensively examine patients with post-traumatic pulmonary insuf. ficiency. Although pulmonary microembolism is not the only pathogenic factor in these patients, it is believed that it is of great pathophysiologic significance in man. The term pulmonary micro-embolism syndrome was named by the authors to emphasize its significance.

It is believed that pulmonary microembolism occurs in two forms. There is an early microembolism syndrome caused by transient deposition of fibrin rich microemboli in the pulmonary microcirculation. This gives rise to a temporarily low ventilation to perfusion ratio and is often subclinical. If inappropriately treated or in the appropriate type of patient, the clinically apparent delayed microembolism syndrome may appear.

This gives rise to increased vascular permeabifity and progressive interstitial and alveolar edema. ‘l’his in turn leads to pulmonary insufficiency and the characteristic radiographic changes of adult respiratory distress syndrome. In this setting increased sympathetic activity with catecholamines and free fatty acid release and acidosis add to the fibrinolysis inhibition and the pulmonary microemboli. This then

progresses to bronchiolar and microvascular constriction.
The policy in treating patients with the microembolism syndrome is outlined. In essence this consists of efforts to prevent the entry of thromboplastic material into the venous circulation by control of bone fractures, debridement of dead tissue and control of infection. They also combat factors which promote coagulation and inhibit fibrinolysis such as chock, acidosis, decreased perfusion, increased catecholamine release and free fatty acid mobilization. In this phase of treatment they use dextran 70 and electrolyte, glucose solutions with blood transfusions as needed and, in addition, alpha receptor blockade. Micropore filters are used when multiple units of stored blood are infused. After hemodynamic restitution it is desirable to keep the patient on the dry side.
Daily administration of dextran 70 and albumin is given along with high caloric nutrition, analgesia and chest physiotherapy. If necessary, volume controlled mechanical ventilation is begun. Heparin is sometimes indicated if there is a shortening of the activated partial thromboplastin time and a decrease of the platelet count. It should be avoided in patients with injury to the brain. Corticosteroids are given in one or two high doses if it is necessary to place the patient on mechanical ventilation. This is done to improve the integrity of the microvascular wall and to counteract pulmonary bronchiolar and microvascular constriction.
John M. Mckain

Operative Trealment of Spontaneous Pneumothorax; Analysis of a Series of 93 Interventions (Le traitement chirurgical du pneumothorax spontane; Analyse d'une serie de 93 interventions). C. Martigne, P. J. Dumas, C. Pinoche and others. Bord.Med., 1980, 13: 1509.
Adequate treatment of pneumothorax, pleurodesis was assured by parietal pleurectomy, sponge abrasion of the diaphragmatic, mediastinal and visceral pleural surfaces, resection of bullae if present and irrigation with iodine solution. Eighty-six patients with spontaneous pneumothoraces underwent 93 procedures described above. Three died of underlying disease such as emphysema, sarcoid and metastases. Operative complications were minimal.
In 24 patients no cause for pneumothorax was found at operation. Seven patients wete operated upon both sides, simultaneously in one and within nine days to eight months in the others. No median sternotomy was used in these bilateral operations for cosmetic reasons and for fear of known bone complications with this incision. Recurrent unilateral pneumothoraces, usUally after a second recurrence or sooner depending upon the presence of bullae visible on roentgenograms, bilateral pneumothoraces and pneumothoraces unresponsive to chest tubing for two weeks were effectively treated in patients by this operation.
Dick T. Thin

Chest Trauma in a Developing Country. Chijioke 11. Anyanwu and Ashok S. Swamp. Ann. R. Coll.Surg.EngL, 1981,63 : 102.
The management of patients with trauma to the chest in a developing country with compromised clinical facilities was reviewed. The aim was correction of hypovolemia, tube drainage and relief of pain by intercostal nerve block. Major operative procedures were adopted in 11 of 145 patients, 7.6 per cent. Operative procedures were performed upon patients for persistent hemorrhage, pyothorax, ruptured diaphragm or ruptured abdominal viscus.
The hospital mortality rate was 9.7 per cent and no late deaths or serious complications were recorded despite admittedly poor clinical follow-up examinations. Attention was drawn to virtually nonexistent methods of transport to hospitals for accident victims, that is, severely injured patients may fail to reach medical care centers in time. It was further pointed out that there exists an inadequacy of hospital beds, blood banks, ventilatois and chemistry services.
Michael £ Mcarthur

Bronchoscopy and Transbronchial Biopsy in Evaluation of Patients with Suspected Active Tuberculosis. Jeanne M. Wallace, Andrew L. Deutsch, James H. Harrell and Keneth A. Moser. Am. J.Med., 1981,70: 1189.

The contribution of fiberoptic bronchoscopy and transbronchial biopsy to diagnosis of pulmonary tuberculosis was investigated in 56 patients who had suspected but not proved tuberculosis. There were 21 women and 35 men ranging in age from 19 to 74 years old. Three or more sputum cultures were negative in 54 patients; whereas, in two patients no sputum could be obtained after repeated aereosolized saline solution sputum induction attempts. Skin tests for tuberculosis were positive in 39 patients, negative in 11, dubious in three and not performed upon the remaining three patients.

Transnasal fiberoptic bronchoscopy was performed using topical anesthesia of 45 per cent tetracame hydroclonde witti I : 1000 epinephrine. After airway examination, 20 ml. saline bronchial washing was performed and brush specimens taken from suspected areas. Patients with abnormal areas that were detected by roentgenograms of the chest underwent transbronchial biopsy under fluoroscopic control. Postbronchoscopy sputum was collected for 12 hours. Smears and cultures were obtained of sputum, bronchial washing and brushing material. In 13 patients, percutaneous needle biopsy of the lung was additionally obtained. Moreover, one patient underwent diagnostic thoracotomy. One patient had a small pneumothorax develop after transbronchial biopsy. Pneumothorax developed in five more patients after percutaneous needle biopsy of the lung. Chest tubes were not necessary in any of these patients.

Fiberoptic bronchoscopy, transbronchial biopsy and percutaneous needle biopsy detected 22 patients, 39 per cent, with tuberculosis and seven patients, 13 per cent, with other pulmonary diseases. Of 27 patients, 48 per cent, with no positive diagnosis, 17 were lost to follow-up examinations. In none of the remaining ten patients who were observed for six months or more was a positive diagnosis of tuberculosis made. The endoscopic aspect of the bronchial mucosa was of little diagnostic importance. Bronchial washings were positive in 13 per cent of the patients, bronchial brushing in 9 per cent and postbronchoscopy sputum smears and cultures in 9 per cetit of patients. Transbronchial biopsy was positive in 30 per cent, showing non-specific chronic inflammation in 11, non-caseating granulomata in three, caseating granulomata in three and caseating granulomata with acid fast bacilli in four patients. Of 13 percutaneous biopsies of the lung, eight were nondiagnostic, four showed tuberculosis and one coccidiodomycosic.

The results of the study emphasized the potential benefit of fiberoptic endoscopy and transbronchial biopsy for immediate diagnosis of tuberculosis and for ultimate diagnosis in suspected patients with tuberculosis with dubious or negative noninvasive findings. Invasive methods doubled the over-all diagnostic yield in detecting tuberculosis or in showing the real cause of symptoms in patients in whom tuberculosis had been erroneously suspected after noninvasive evaluation

Erich W. Pollak

The Effect of Metastasectomy: Fact or Fiction? Torkel Aberg, Kjell-Ake Malberg, Bert Nusson and Enn Nou. Ann. Thorac. Surg., 1981, 30 378.

Seventy patients who were surgically treated were compared with a small, historic control group of 12 patients. There was no difference in five year survival, but by seven years, all the controls were dead and 17 per cent of the surgical group of patients was alive. This was not of statistical significance. Twelve patients from 1937 to 1964 were compared with 70 patients who were surgically treated, with the vast majority' of these being between 1970 and 1978, the fmal years of the study. Patients with malignant melanoma metastases did significantly worse than those with renal cell carcinoma or sarcoma of the kidney.

Several series are reviewed that proposed that patients who fulfill the criteria for lung metastasectomy probably comprise a selected group with a particularly benign tumorhost relationship. It is believed that a follow-up period of at least ten years must be used in scientific evaluation of the metastasectomy

material. The authors propose randomized studies in this area.
Martin J. Fischer

Pericardial Window for Malignant Pericardial Effusion. John R. Hankins, John R. Satterfield, Joseph Aisner and others. Ann. Thorac. Surg., 1980, 30 : 465.
Seventeen patients with malignant pericardial effusion who were treated by the creation of a pericardial window are reviewed. Sixteen of the patients were adults ranging in age from 19 to 74 years old. The remaining patient was a four year old child with Wilms' tumor. The primary malignancies causing the effusion were: carcinoma of the lung, 12 patients, three with small cell and nine with other cell types; Hodgkin's disease, three patients; carcinoma of the breast, one patient; and Wilms' tumor, one patient. In no patient was the pericardium the only site of metastasis. The excision of the pericardial window was performed through a subxiphoid approach in 13 patients and through limited anterior thoracotomy or sternotomy incisions in four. Postoperatively, the pericardial cavity was drained with two 24 French plastic catheters, usually for 48 to 72 hours.
There were no patient deaths attributable to the pericardial window procedure. The only complication was a right pneumothorax. In all patients the relief of the cardiac compression afforded by the pericardial window was immediate and complete. No patient showed a clinically significant redurrence of the effusion. One patient who had received irradiation required pericardiectomy for constriction five months later.
Survival was determined principally by the nature and the extent of the primary tumor. Six patients died of the primary tumors within 30 days, but six survived three to 12 months and two patients are alive at eight and 21\months. Creation of a pericardial window, preferably by the subxiphoid approach, is the treatment of choice for malignant pericardial effusion. The procedure provides an accurate diagnosis, carries virtually no mortality or morbidity and affords immediate and long lastinj relief of cardiac compression.
Shuichiro Sugbnura

Prospective Randomised Study of Coronary Artery Bypass Surgery in Stable Angina Pectoris. Second Interim Report by the European Coronary Surgery Study Group. Lancet, 1980, 2: 491.
The Study included the follow.up examinations of 768 men who were under the age of 65, who had angina pectoris for three months or longer, with an obstruction greater than 50 per cent in at least two major coronary arteries and a left ventricular ejection fraction greater than 50 per cent. Patients who had severe angina pectoris that could not be controlled by medical therapy were excluded.
The primary objective of this study was to answer the question as to whether or not coronary bypass prevented death in patients with mild to moderately severe angina pectoris. Three hundred and seventy-three patients were medically treated and 395 patients underwent operation. The patients who underwent operation had five year survivals of 93.5 per cent and those on medical treatment had five year survivals of 84.1 per cent. Patients with left main coronary artery disease and three vessel disease benefited most from operation, 92.9 per cent versus 61.7 per cent and 94.9 per cent versus 84.8 per cent, respectively. No significant difference was found between the two groups in patients with two vessel disease.
Symptomatic improvement, consumption of Beta-adrenergic blocking agents and exercise performance were also significantly better for the patients who underwent operation. At three years, 69 per cent of the patients who were medically treated and 33 per cent of the patients who underwent operation were still receiving Beta blockers. Seventyeight per cent of the patients who underwent operation and only 50 per cent of the patients who were medically treated were improve4 or asymptomatic at three years. There was no evidence that suggested that the increased survival and improved quality of life in the patients who underwent operation was due to factors other than coronary artery bypass operation that was done as early as possible after randomization. This study was possibly the first to demonstrate a

significant difference in survival between surgical versus medical treatment in patients with angina pectoris.

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